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Remarks

The Applicants respectfully request reconsideration in view of the foregoing amendments and following remarks.

Claims 34, 35, 39, 40, 43-47, 49-57, 59-70 and 72-76 are pending, of which claims 34, 39 and 62 are independent. In the Office action dated September 1, 2006 ("Office action"), the Examiner rejects claims 34, 35, 39, 40, 43, 47-56, 60-62 and 66-76 under 35 U.S.C. §103 as being unpatentable over U.S. Patent Publication No. 2002/0061073 to Huang et al. ("Huang") in view of U.S. Patent Publication No. 2002/0191712 to Gaddam ("Gaddam") and U.S. Patent Publication No. 2003/0053416 to Ribas et al. ("Ribas"). The Examiner rejects claims 44-46, 57-59 and 63-65 under 35 U.S.C. §103 as being unpatentable over Huang in view of Gaddam, Ribas and U.S. Patent Publication No. 2004/0142699 to Jollota ("Jollota"). The Applicants respectfully disagree with the rejections of the claims.

The Applicants have amended claims 34, 39 and 62. The application as filed supports the amendments at, for example, paragraphs 21, 29-34 and 40-46. The Applicants have amended claims 68, 69 and 73 for the sake of consistency. The Applicants have canceled claims 48, 58 and 71 without prejudice.

I. Claims 34, 35, 39, 40, 43, 47, 49-56, 60-62, 66-70 and 72-76.

Huang, Gaddam and Ribas, taken separately or in combination, fail to teach or suggest at least one limitation of each of claims 34, 35, 39, 40, 43, 47, 49-56, 60-62, 66-70 and 72-76. In addition, the combination of Huang, Gaddam and Ribas is improper.

A. Independent Claims 34, 39 and 62.

Claim 34, as amended, recites:

based at least in part upon the level of robustness for the robust channel and effective rate of the data of the selected channel, identifying a buffer size using one or more of the multiple sets of buffer parameters, wherein for different levels of robustness the rate-buffer size curve provides different buffer sizes for the data of the selected channel.

Claim 39, as amended, recites:

identifying a buffer size based at least in part upon the level of robustness for the robust channel, effective rate of the data of the selected channel, and one or more

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of the multiple sets of buffer parameters, wherein the rate-buffer size curve indicates different buffer sizes for different levels of robustness.

Claim 62, as amended, recites:

based at least in part upon the level of robustness for the robust channel and effective rate of the data of the selected channel, identifying buffer size using one or more of the multiples sets of reference decoder parameters, the rate-buffer size curve providing different buffer sizes for different levels of robustness.

Huang, Gaddam and Ribas, taken separately or in combination, fail to teach or suggest the above-cited language of claims 34, 39 and 62, respectively.

As for Huang and Gaddam, in the Office action, the Examiner acknowledges that the combination of Huang and Gaddam "does not disclose expressly a set of buffer parameters." (Office action, page 4.) The Applicants note that Huang and Gaddam are even further from teaching or suggesting the above-cited language of claims 34, 39 and 62, respectively.

The Examiner asserts, however, that Ribas "teaches identifying a corresponding set of buffer parameters (RBF) from a descriptor" and "a set of buffer parameters designating the RBF (rate, buffer size, and initial fullness) values of the receive buffer." (Office action, page 4.) The Applicants acknowledge that Ribas describes, a "generalized reference decoder that operates according to any number of sets of rate and buffer parameters for a given bit stream," where each set "characterizes a leaky bucket model and contains three parameters representing the transmission bit rate, buffer size, and initial decoder buffer fullness." (Ribas, Abstract.) The leaky bucket models relate transmission rate R to buffer size B. According to Ribas:

[G]iven a desired peak transmission rate R', which is known at the decoder end, the generalized reference decoder selects the smallest buffer size and delay (according to the available (R, B, F) sets whether by selection of one, interpolation between two or more, or by extrapolation) that will be able to decode the bit stream without suffering from buffer underflow or overflow. Alternatively, for a given decoder buffer size B', the hypothetical decoder will select and operate at the minimum required peak transmission rate.

(Ribas, ¶ 9; *see also* ¶ 8, 28-30, 34 and 35.) Ribas describes using a given bit stream (and given sets of RBF parameters) with devices with different physical buffer sizes. Ribas also describes using the given bit stream (and given sets of RBF parameters) when transmitting over different types of networks to devices. According to Ribas: .

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The benefits of specifying multiple leaky buckets to the generalized reference decoder are realized where a single encoding is transmitted over channels with different peak rates, or to devices with different physical buffer sizes. However, in practice this is becoming more and more common. For example, content that is encoded offline and stored on a disk is often played back locally, as well as streamed over networks with different peak rates. Even for local playback, different drives speeds (e.g., 1X CD through 8X DVD) affect the peak transfer rate. Moreover, the peak transmission rates through network connections also vary dramatically according to the speed of the limiting link, which is typically near the end user (e.g., 100 or 10 baseT Ethernet, T1, DSL, ISDN, modems, and so forth). Buffer capacities of playback devices also vary significantly, from desktop computers with gigabytes of buffer space to small consumer electronic devices with buffer space that is smaller by several orders of magnitude. The multiple leaky buckets and the proposed generalized reference decoder of the present invention make it possible for the same bit stream to be transmitted over a variety of channels with the minimum startup delay, minimum decoder buffer requirements, and maximum possible quality. This applies not only to video that is encoded off-line, but also to live video that is broadcast simultaneously through different channels to different devices. In short, the proposed generalized reference decoder adds significant flexibility to existing bit streams.

(Ribas, ¶ 60.) Generally, in Ribas, rate relates to buffer size for a leaky bucket model for a reference decoder. Relating *rate to buffer size* (as in Ribas) is different than using reference decoder (e.g., buffer) parameters in ways that relate *level of robustness to buffer size*. Ribas does not teach or suggest a "rate-buffer size curve" that "for different levels of robustness ... provides different buffer sizes for the data of the selected channel" (claim 34), "indicates different buffer sizes for different levels of robustness" (claim 39) or provides "different buffer sizes for different levels of robustness" (claim 62). Ribas also does not teach or suggest identifying a buffer size "based at least in part upon the level of robustness for the robust channel," as recited in claims 34, 39 and 62, respectively.

Huang, Gaddam and Ribas, taken separately, fail to teach or suggest the above-cited language of claims 34, 39 and 62, respectively. The combination of Huang, Gaddam and Ribas also fails to teach or suggest the above-cited language of claims 34, 39 and 62, respectively.

For at least these reasons, claims 34, 39 and 62 should be allowable.

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B. Dependent Claims 35, 40, 43, 47, 49-56, 60, 61, 66-70 and 72-76.

Each of claims 35, 40, 43, 47, 49-56, 60, 61, 66-70 directly or indirectly depends from and includes the language of one of claims 34, 39 and 62. In view of the foregoing comments, the Applicants will not belabor the merits of the separate patentability of these dependent claims. Dependent claims 35, 40, 43, 47, 49-56, 60, 61, 66-70 and 72-76 should be allowable.

C. The Examiner's Combination of Huang, Gaddam and Ribas Is Improper.

In rejecting the claims, the Examiner combines Huang with Gaddam then combines Huang/Gaddam with Ribas. The Examiner's combination of Huang/Gaddam and Ribas is improper because Gaddam teaches away from the combination and Ribas teaches away from the combination. (MPEP 2145.) In particular, in Gaddam:

> The system includes a digital signal transmitter for generating a first Advanced Television Systems Committee (ATSC) standard encoded 8-VSB bit stream and, for generating an encoded new robust bit stream.... The standard 8-VSB bit stream and new bit stream may be simultaneously transmitted over a terrestrial channel according to a broadcaster defined bit-rate ratio. ... A receiver architecture is additionally provided to decode standard and robust bit-streams transmitted by the transmitter device.

(Gaddam, Abstract.) This involves simultaneously transmitting multiple alternative streams to a given receiver. In contrast, Ribas describes transmitting a given stream to multiple decoders. (See, e.g., Ribas, ¶ 60.) Transmitting multiple alternative streams to a given receiver (as in Gaddam) teaches away from a combination with a system in which a given stream is transmitted to multiple different decoders (as in Ribas). Conversely, transmitting a given stream to multiple different decoders (as in Ribas) teaches away from a combination with a system in which multiple alternative streams are transmitted to a given receiver (as in Gaddam).

For at least this reason, the combination of Huang, Gaddam and Ribas made to reject claims 34, 35, 39, 40, 43, 47, 49-56, 60-62, 66-70 and 72-76 is improper, and these claims should be allowable.

II. Claims 44-46, 57, 59 and 63-65.

Huang, Gaddam, Ribas and Jollota taken separately or in combination, fail to teach or suggest at least one limitation of each of claims 44-46, 57, 59 and 63-65. Each of claims 44-46,

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57, 59 and 63-65 directly or indirectly depends from and includes the language of one of claims 34, 39 and 62. As noted above, Huang, Gaddam and Ribas, taken separately or in combination, fail to teach or suggest the above-cited language of claims 34, 39 and 62, respectively. Jollota describes ways to indicate link quality between wireless base station units of a wireless network (Jollota, Abstract), but fails to teach or suggest the above-cited language of claims 34, 39 and 62, respectively.

Moreover, the combination of Huang, Gaddam, Ribas and Jollota is improper for at least the reason that the combination of Huang, Gaddam and Ribas is improper (noted above).

For at least these reasons, claims 44-46, 57, 59 and 63-65 should be allowable. In view of the foregoing comments, the Applicants will not belabor the merits of the separate patentability of dependent claims 44-46, 57, 59 and 63-65.

III. Request for Interview.

If any issues remain, the Examiner is formally requested to contact the undersigned attorney in order to arrange a telephonic interview. It is believed that a brief discussion of the merits of the present application may expedite prosecution. Applicants submit the foregoing formal Amendment so that the Examiner may fully evaluate Applicants' position, thereby enabling the interview to be more focused. This request is being submitted under MPEP § 713.01, which indicates that an interview may be arranged in advance by a written request.

IV. Conclusion.

Claims 34, 35, 39, 40, 43-47, 49-57, 59-70 and 72-76 in their present form are allowable. Such action is respectfully requested.

Respectfully submitted,

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